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2012

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citation for published version (APA)

Gooren, E. M. J. C. (2012). *Peers Matter: Social Problems in Kindergarten and the Development of Psychopathology*. [PhD-Thesis - Research and graduation internal, Vrije Universiteit Amsterdam].

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Chapter 6

General Discussion

The general aim of the present thesis was to contribute to understanding the causes of children's failures to develop satisfying social relations in kindergarten and the significance of this failure for children's psychological development. In the introduction the following four key questions with regard to this aim were formulated: 1: What is the significance of kindergarten social problems in the development of psychopathological problems in childhood and in adolescence?; 2: Do we need to account for kindergarten social problems when trying to understand the pathway from emotional skills to psychopathological problems?; 3: Are children's social and emotional skills in kindergarten underlying factors in the development of social problems?; 4: Does the development of social problems and its role in the development of psychopathology differ for boys and girls?

In the following, these questions will be addressed by outlining the main findings and conclusions of the studies reported in Chapter 2 to 5. In addition, implications for theory and prevention, as well as direction for future research are discussed.

Question 1: What is the Significance of Kindergarten Social Problems in the Development of Psychopathological Problems in Childhood and in Adolescence?

One may wonder to what extent we should worry about a child having social problems in kindergarten. Do such problems have a lasting effect? We know that social problems, particularly peer rejection, may explain increases in behavioral and emotional problems over the elementary school period (Keiley, Bates, Dodge, & Petit, 2000; Ladd, 2006). But do such problems explain why children develop increasingly more problems over childhood and adolescence? For instance, children transition to high school at age 12 years. This may provide new developmental opportunities. Hence, the impact of social problems may be temporarily, and hardly affect the child's life beyond elementary school.

Although the role of social problems in the development of psychopathological problems has been focus of numerous studies, the impact of encountering social problems already in kindergarten on children's psychological development still needs further clarification. The studies described in chapter 2 and 3 did address this question and come with a pessimistic conclusion. The early social problems that a child may encounter have a profound effect on children's future functioning, and may explain why children develop both behavioral and emotional problems.

Specifically, in chapter 2 the impact of kindergarten social problems in predicting externalizing and internalizing problems covering multiple developmental periods (i.e.,

childhood and adolescence) was studied. We studied whether kindergarten social problems added to the prediction of externalizing and internalizing problems above and beyond existing problems. Moreover, we used clinically elevated levels of externalizing and internalizing problems. The question at hand was thus whether kindergarten social problems add to the prediction of children who develop high and clinically elevated levels of externalizing and internalizing problems.

Our results showed that having social problems as early as kindergarten indeed puts a child at risk for developing psychopathological problems over multiple developmental periods. Thus, besides influencing a child's development over the elementary school period, the detrimental influence of kindergarten social problems is persistent as it was still found after the children grew up to be adolescents. Specifically, results indicated that the long-term influence of kindergarten social problems might be particularly true for externalizing problem development as multiple pathways may contribute to such problem development. Kindergarten social problems increased the odds of having clinically elevated levels of social problems as a 10 year old by approximately 100%, while it simultaneously increased the odds of having clinically elevated levels of externalizing problems by approximately 80% at age 10 years. Together these social problems and externalizing problems at age 10 years increased the odds of having clinically elevated levels of externalizing problems at age 18 years by again 100%. In addition to its influence on externalizing problems, kindergarten social problems also increase the odds of developing clinically elevated levels of internalizing problems as 18 year olds also increased by 100 %. However, this pathway applied only to boys.

To put the increases in risk encountering clinically elevated levels of externalizing and internalizing problems as a function of kindergarten social problems in perspective: the increases in risk are comparable to the increases in risk of coronary heart disease due to having high serum cholesterol (Truett, Cornfield, & Kannel, 1967). Therefore, these results highlight the need of taking the early developing social relations of kindergartners into account when we aim at understanding and explaining these young children's further psycho(patho)logical development over several developmental spans. Thereby, these results add to the existing knowledge on the role of social problems – or related constructs – in development of externalizing and internalizing problems in childhood and adolescence (Bornstein, Hahn, & Haynes, 2010; Burt, Obradović, Long, & Masten, 2008; Burt & Roisman, 2010; Hofstra, van der Ende, & Verhulst, 2002; Ladd, 2006; Mesman, Bongers, & Koot, 2001; Sturaro, van Lier, Cuijpers, & Koot, 2011).

After having found that social problems can have a lasting influence on the development of both externalizing and internalizing problems, our next question was whether peer rejection (one of the core aspects of social problems) may explain why children with behavior problems in kindergarten end up developing emotional problems. In other words, we wanted to know whether poor peer relations may also explain why one form of psychopathology spreads out to new forms of psychopathology already at such young ages. Therefore, in chapter 3, we studied whether kindergarten peer rejection might explain why children with conduct problems start to develop depressive symptoms as well. Results indicate that, in line with the failure model of Patterson and Capaldi (1990), children with conduct problems may develop depressive symptoms because of the peer relational difficulty these children experience. That is, our results suggest a cascade in which early conduct problems put children at risk of becoming rejected from the mainstream peer group. This in turn puts them at risk for developing depressive symptoms. Additionally, given that symptoms of depression may first emerge during the early elementary school period and increase thereafter (Bongers, Koot, van der Ende, & Verhulst, 2003), our results not only govern information on the co-occurrence of conduct problems and depressive symptoms at this young age, but they furthermore provide insight in why children may start to develop depressive symptoms for the first time.

In conclusion, results reported in chapter 2 and 3 do underscore the role of kindergarten social problems in the development of externalizing and internalizing problems. This role starts to manifest itself immediately, as having social problems within the first phase of formal schooling already explains why children with externalizing problems are likely to develop internalizing problems within that same period (chapter 3). In fact, the study in chapter 3 suggests that knowing whether children are rejected by peers helps us to understand why children might start to develop internalizing problems during this phase. In addition to affecting children's psycho(patho)logical development immediately, experiencing social problems in kindergarten seems to have an prolonged effect as we found predictive links up to age 18 years old.

Question 2: Do we Need to Account for Kindergarten Social Problems when Trying to Understand the Pathway from Emotional Skills to Psychopathological Problems?

Given the predictive role of kindergarten social problems in the development of psychopathological problems as shown in the studies described in chapters 2 and 3, a logical follow-up question may be whether we should account for social problems when

trying to understand why children who lack in emotional competence in kindergarten end up developing psychopathological problems. Children's emotional competences are considered a core aspect of their successful adaptation to the new school environment (Halberstadt, Denham, & Dunsmore, 2001; Masten & Coatsworth, 1998). Indeed, it has been theorized that the development of both conduct problems and social problems may depend on deficiencies in emotional competence in the early school-age period. For instance, Keenan and Shaw (2003) concluded that the development of emotion regulation skills in part accounts for the normative decreases in aggressive behavior during childhood. In addition, Halberstadt et al. (2001) point to emotional competence as an important factor leading to satisfying social relations. In line with this, emotional competence has been associated with elementary school children's aggressive behavior (e.g. Arsenio, Cooperman, & Lover, 2000; Bohnert, Crnic, & Lim, 2003), or their social status (e.g. Eisenberg, Liew, & Pidada, 2004; Miller, Gouley, Seifer, Zakriski, Eguia et al., 2005). Despite this theoretical and initial empirical evidence, the pathway of influence of poor emotional competence on problem behavior development, and the possible role of peer social preference in this is still unclear.

In the study described in chapter 4, we therefore studied the links between children's emotional competence development and the development of conduct problems while taking into account the development of peer relations. Specifically, we studied whether children lacking in emotional competence within the first phase of formal schooling indeed are at risk of developing conduct problems, and whether the pathway leading to these conduct problems is mediated by the social problems these children with poor emotional skills may encounter. We found that children, who, compared to their classmates showed a relative poor emotional competence development over the period of kindergarten to first grade, indeed were at risk of developing conduct problems. However, children with poorer emotional competences were also most likely to develop poor relations with mainstream peers. These poor relations with peers explained why children with poor emotional competences were at risk of developing conduct problems. In addition to explaining the link between emotional competence and conduct problems, this chapter showed initial evidence that children's social/emotional competences may lead to the development of peer rejection. Factors underlying the development of peer rejection were further explored in chapter 5.

Question 3: Do Kindergarten Social and Emotional Skills Operate as Underlying Factors in the Development of Social Problems?

The results from the studies so far highlight the importance of early peer relations in children's development. This warrants a further understanding of factors that may explain why some children become liked among peers already in kindergarten, while other children become rejected by peers. A number of important theoretical assumptions point towards social and emotional skills as important factors leading to satisfying social relations (Halberstadt et al., 2001; Hay, Payne, & Chadwick, 2004). However, the empirical evidence on this is limited as, to our knowledge, no previous study did address associated change in social or emotional skills and social preference, and none tested whether developmental changes in social or emotional skills in time precede changes in social preference, while controlling for concurrent links.

To address this limitations this study used parallel assessments of all constructs. In addition to this we used a unique design in furthering our knowledge on factors contributing to the development of peer social preference, namely a quasi experimental design where we aim to manipulate factors that are theorized to underlie this development by means of a (preventive) intervention program (Cicchetti & Hinshaw, 2002). Specifically, if social and emotional skills underlie the development of likeability among peers in the classroom, then it should be that improvements in social and emotional skills, due to children receiving a preventive program aimed at enhancing such skills, result in improvements in social preference among peers. This is exactly what was tested in the chapter 5. That is, we tested whether a preventive intervention (PATHS; Kusché & Greenberg, 1994) aimed at improving children's social and emotional skills in elementary school resulted in improvements of such skills in children, and whether these improvements subsequently increased their relative likeableness among their peers (social preference).

We found support for social skills as an underlying factor in the development of children's peer social preference. Results showed that the intervention improved children's prosocial behaviors when compared to control group children. This improved social behavior preceded, and predicted improvements in social preference among intervention children when compared to controls.

In contrast to the results on social skills, results with respect to emotional skills were somewhat different. Children's emotional awareness was improved by the intervention. However, these improvements did not explain why children's social

preference improved. Moreover, the results of our study could not confirm nor reject the role of emotion regulation skills in the development of social preference, as no intervention effects were found on children's emotion regulation skills.

In conclusion, children entering kindergarten with sufficient social skills do have good chances of developing positive peer relations. Children lacking such social skills however appear to be at risk of encountering early social problems, as expressed by peer rejection. This study, however, indicates that these at risk children can be prevented from embarking on such a negative developmental path by stimulating their prosocial behavior. With regard to emotional skills no sound conclusions can be drawn.

Question 4: Does the Development of Social Problems and its Role in the Development of Psychopathology Differ for Boys and Girls?

Although research has focused on level differences in all the constructs studied in this thesis, the question on whether the links between social and emotional skills, social problems and psychopathology development are different between boys and girls is not yet answered, or even systematically studied (Deater-Deckard, 2001). Therefore associations described in this thesis were always tested for sex differences. We found few sex differences in these links.

In fact, a relatively consistent picture emerged. Apart from finding that kindergarten social problems predict internalizing problems at the end of elementary school only for boys, we found no evidence that the pathways as studied in this thesis were different for boys and girls. This indicates that although boys may experience more social problems than girls, the influence of social problems, or peer rejection, on the development of externalizing problems is similar. Also, the role of social problems in the link between emotional competences and psychopathology development, and the influence of social skills on social preference development seems similar between the sexes, despite the fact that boys may score worse on each of these studied constructs.

Strengths and Limitations

The reports of the empirical studies described in chapter 2 to chapter 5 indicate the strengths and limitations for each empirical study specifically. In the following some important strengths and limitations with regard to the overall study are provided.

The studies reported in this thesis have some important strengths in common. First, only longitudinal studies were used in which all used measures were assessed repeatedly.

This enabled us to study the development of the constructs of interest while controlling for the initial level of each construct. For instance, when studying the development of conduct problems over kindergarten and grade one, it is important to control for levels of conduct problems that already exist at school entry. Moreover, having parallel repeated assessments of each construct enabled us to study related change of constructs over time as well as pathways of influence between constructs over time while controlling for concurrent links.

Furthermore, each study reported in this thesis started in kindergarten and focused on the developmental changes and their meaning across and beyond kindergarten. Kindergarten is the period in which children enter formal schooling for the first time and start their school careers. Given the fact that classroom composition is more or less stable across grades within the Dutch school system, this is the period during which children start to acquire a social position within the classroom peer group in which they will likely stay for their entire elementary school career. This, in combination with the knowledge that a child's peer status has been found difficult to change and easily becomes stable (Brendgen, Vitaro, Bukowski, Doyle, & Markiewicz, 2001), highlights the importance of the reported studies.

However, the studies also have several limitations. A first limitation involves the composition of the samples used to study the research questions in this thesis. Our study samples were comprised of predominantly Caucasian children living in the Netherlands. We know, however, that ethnic minority children experience more social rejection than ethnic majority children (Ladd & Burgess, 2001; Lochman & Wayland, 1994). It is therefore uncertain whether our results can be generalized to a more diverse population, including for example children from other ethnical backgrounds.

A second limitation is the relatively short follow-up period of the studies described in chapter 3, 4 and 5. Because the studies focused on developmental processes during the first two years of formal education, our conclusions are limited to this age period and possible consequences for the long term cannot be inferred from these studies.

Third, the longitudinal associations demonstrated in the studies do not imply causal links between studied constructs. For instance, other factors may explain why children with social problems respond with increased externalizing and internalizing problems, such as the development of (negatively) biased social cognitions (Dodge, Lansford, Burks, Bates, Pettit et al., 2003), or the development of a low sense of self competence (Cole, Jacquez, & Maschman, 2001; Masten & Coatsworth, 1998). Including such factors in further studies may provide insights in the processes that explain why children with social problems in the

early school period end up developing externalizing problems and internalizing problems later in life.

A final limitation involves the design used in the studies described in chapter 3 and 4. Half of the children in this sample received the PATHS intervention. As described in chapter 5, this intervention was designed to stimulate children's social and emotional skills, and as shown in chapter 5 indeed was found to be effective within this kindergarten sample. Possibly receiving this intervention may have influenced the associations found in the studies reported in chapter 3 and 4. Although, all models were tested for intervention effects and showed that associations were similar for children in the control and in the intervention group, we do not know whether the intervention may have affected other (unmeasured) constructs which might have influenced our results.

Implications for Practice and Policy

The studies in this thesis showed that experiences with peers as early as in kindergarten are of crucial importance in the development of boys as well as girls. These findings have several implications for prevention and intervention efforts.

First, the studies indicate that during the first phase of children's school careers forming and maintaining positive peer relations are important challenges children have to meet. Not succeeding in meeting these early social challenges imposes a risk for children's immediate and future psychological well-being. This is an important message for clinicians helping children with psychopathological problems, as it signals the potential impact of children's early peer experiences on their emotional and behavioral development. Also for kindergarten and first grade teachers it seems imperative to be aware of the early unfolding peer group processes in their classes. Moreover, we found that children without sufficient social and emotional skills at school entry are more likely to encounter negative peer experiences as they run the risk of becoming rejected by their peer group. Assessing children's social as well as emotional skills at school entry can therefore provide insights into the chances a child has of adequately responding to the new social demands set by the kindergarten environment.

Second, results reported in this thesis offer some initial leads to tools needed for guidance of and intervention in the peer group process. That is, results underscore that focusing on improvement of children's social skills over the course of kindergarten and first grade has a positive impact on the peer experiences these children have, and thus can be meaningful in influencing children's chances of successful adaption to the kindergarten

social demands. Given the fact that over 10-15 percent of the children will experience (chronic) peer rejection during elementary school (Deater-Deckard, 2001; Rubin, Bukowski, & Parker, 2006) and results of this thesis underscore the unhealthy impact that such experiences have on a child's immediate as well as long-term psychological development, the finding that children's peer relations can be positively influenced by adopting lessons on (in any case) social skills into the academic curriculum is a promising one. This indicates that with relatively low effort a reasonably large group of children can possibly be prevented from embarking on developmental pathways that impose a risk for their immediate as well as their long term well-being.

Directions for Future Research

Findings reported in this thesis suggest several possible directions for future research. For instance, results in this thesis show that, on the one hand, early social problems are predictive of later psychopathological problems, and on the other hand that such early social problems are malleable by stimulating children's social skills. An important next step would be to examine whether changing children's social problems through stimulating their social (and possibly their emotional skills) translates into a decreased risk of developing psychopathological problems across a longer age period.

Moreover, given the significance of children's early peer relations and the found links between children's social and – to a lesser extent – emotional skills, it seems important to gain insight in why some children lag behind in their social and emotional skills at school entry. Such knowledge can inform the development of prevention efforts focusing on the early childhood period.

Conclusions

Findings presented in this thesis provide knowledge serving theoretical as well as practical aims. Overall the findings of the present thesis highlight the significance of experiencing social problems and specifically peer rejection for a child's development during the first phase of formal schooling. Experiencing such early social problems can set a child off on a dysfunctional developmental pathway resulting in immediate as well as long-term psychopathological problems. Thus, the first experiences children have with their peers after the transition into school already matter. They start to count immediately after school entry and have a prolonged influence on children's psychological adjustment.

It furthermore seems that children experiencing social problems during this first phase of formal schooling, likely entered kindergarten with insufficient social and emotional skills to deal with the new social challenges in the school environment. Stimulating children's social skills during this early developmental period, however, has the healthy impact of improving their peer relations, indicating that children's early social problems appear to be malleable. Findings reported in this thesis thereby not only convey the pessimistic message on the influence of social problems, but fortunately also convey a more positive message when it comes to intervening in the process of developing social problems.

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